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February 9, 1993

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

United States Environmental
Protection Agency
Attn: Ms. Cheryl Allen
Community Relations Coordinator
77 West Jackson Boulevard
Chicago, IL 60604-3590

Re: Skinner Landfill Superfund Site

Dear Ms. Allen:

Enclosed for inclusion in the Administrative Record are the Skinner Landfill PRP Group's Public Comments on U.S. EPA's December 1992 Fact Sheet Regarding the Skinner Landfill Site.

Very truly yours,

Laura A. Ringenbach

Laura A. Ringenbach
On Behalf of the
Skinner Landfill PRP Group

Enclosure

cc: Mr. John Breslin, U.S. EPA (w/ encl.)
Mr. James Van Der Kloot, U.S. EPA (w/ encl.)
Ms. Kathy Fox, Ohio EPA (w/ encl.)

SKINNER LANDFILL PRP GROUP'S
PUBLIC COMMENTS ON U.S. EPA'S
DECEMBER 1992 FACT SHEET
REGARDING THE SKINNER LANDFILL SITE

Prepared by:

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Submitted to:

United States Environmental Protection Agency
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FOR INCLUSION IN THE ADMINISTRATIVE RECORD

February 9, 1993

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I. INTRODUCTION

A. PREFACE

In accordance with Section 117(a)(2) of the Comprehensive Environmental Response, Compensation and Liability Act, (hereinafter "CERCLA"), 42 U.S.C. 9601 et seq., the Skinner Landfill PRP Group, consisting of Aeronca, Inc., Chemical Leaman Tank Lines, The Dow Chemical Company, Ford Motor Company, Formica Corporation, General Electric Aircraft Engines, Monsanto Company, Morton International, PPG Industries, Inc. and Velsicol Chemical Corp. (hereinafter the "Group") has prepared these public comments for submission to the United States Environmental Protection Agency (hereinafter "U.S. EPA" or the "Agency") in response to the December 1992 Fact Sheet entitled "U.S. EPA Re-Evaluates Cleanup Alternatives for the Skinner Landfill Site" (hereinafter "Fact Sheet"). The Skinner Landfill PRP Group hereby requests that these comments, together with the supporting and referenced documents submitted or referred to herein, be made part of the Administrative Record with respect to the Skinner Landfill Superfund Site (hereinafter "Skinner Landfill" or the "Site"). The Group, by the submittal of these comments, waives no rights or opportunities to submit further comments or objections regarding the Skinner Landfill and any future or past activities related to the Site.

The Skinner Landfill PRP Group and its individual members submission of these comments shall not be construed, interpreted or constitute an admission of liability for any purpose or any admission of law or fact. The Group and its individual members do not waive, release, discharge or limit any right, claim, demand or defense which they are entitled to pursuant to any statutory or common law. The submission of these comments shall not be construed as estoppel against the Group or its individual members. Furthermore, the Group and its individual members deny any and all liability and/or damages arising from activities at the Skinner Landfill based upon alleged violations of CERCLA or any alleged violations of federal, state, or local laws, regulations or ordinances.

B. BACKGROUND

The Skinner Landfill is located fifteen miles north of Cincinnati in Union Township of Butler County near West Chester, Ohio. The Skinner Landfill was originally used as a sand and gravel pit. Beginning in 1934, general municipal refuse was landfilled at the Site. In 1963, the Butler County Board of Health approved the Skinner Landfill as a sanitary landfill. In addition to general municipal refuse, some industrial waste is believed to have been disposed of at the Skinner Landfill. In April of 1976, the Ohio Environmental Protection Agency (hereinafter "Ohio EPA"), along with other local agencies, entered the Skinner Landfill and observed drums marked with the term "chemical waste." Aerial photographs taken in January and February of 1976 showed a lagoon assumed to contain liquid wastes and several hundred drums scattered throughout the Site.

The Ohio EPA returned in May of 1976 to find access to the Skinner Landfill blocked by a bulldozer. The Ohio EPA was informed by the Site owner and operator, Mr. Albert Skinner, that nerve gas, mustard gas, incendiary bombs, phosphorous, flame throwers, cyanide ash and explosive devices were buried there. Upon hearing this, the Ohio EPA immediately withdrew from the Site. These investigators returned several days later with representatives of the Army Special Unit. They noted that the lagoon had been recently filled in by Mr. Skinner. See Feasibility Study for the Skinner Landfill Site, April 1992, (hereinafter "FS") at pages 1-4.

Over the next several years, a succession of minor Site investigations occurred. From August 1977 until January 1979, the Ohio EPA tried without success to obtain a court order forcing Mr. Skinner to remove waste from the property. A court order, however, was obtained to prohibit future non-permitted disposal of industrial waste. In 1980, a U.S. EPA Field Investigation Team was refused entry to the Landfill by Mr. Skinner. A team returned in July of 1982 and detected volatile organic compounds (hereinafter "VOCs") near the

purported waste lagoon. In December of 1982, the Skinner Landfill was placed on the National Priority List (hereinafter "NPL").

No further Site activity occurred until 1986 when U.S. EPA initiated Phase I of the Remedial Investigation (hereinafter "RI"). From 1976 until 1990, Ohio EPA and U.S. EPA permitted Mr. Skinner to continue his landfilling activities at the Site. As a result, allegedly hazardous waste was buried beneath at least twenty feet of demolition debris. Not until August of 1990 was an order obtained preventing all further landfilling activities.

C. SITE CONDITIONS

The Phase I Remedial Investigation/Feasibility Study (hereinafter "RI/FS") initiated in 1986 included a geophysical survey and sampling of groundwater, surface water and soils. Phase II of the RI/FS, which began in 1989 and was completed in the Spring of 1992, included further investigation of ground and surface water, soils and sediments. Residential wells and the East Fork of Mill Creek were also investigated.

Samples taken at the Skinner Landfill indicated the presence of VOCs, pesticides and elevated concentrations of metals. According to the Proposed Plan for remediation of the Site, dated April, 1992 (hereinafter "Proposed Plan"), the most highly contaminated soils are those in the area of the buried waste lagoon. The U.S. EPA states that the remaining portions of the Site contain industrial and solid waste mixed with demolition materials.

Off-site migration of contaminants has been minimal. As stated in the Proposed Plan, "[t]he only evidence of contaminants potentially leaving the site through groundwater migration was the detection of ethylbenzene at low levels located across the east fork of Mill Creek from the buried lagoon." Proposed Plan at 6. The Proposed Plan specifically acknowledges that there has been minimal migration of contaminants from the Site: "Significant migration has been hindered, to date, by the clayey soils under most of the waste

lagoon and because the waste lagoon is normally wholly above the water table." Proposed Plan at 9. After more than fifteen years of uncontrolled infiltration of precipitation through the clayey soils, the studies indicate that no or little migration has occurred.

The Skinner Landfill presents no appreciable risk of hazardous air emissions. The Proposed Plan states that "[i]nhalation of fugitive dust and volatile chemicals was also evaluated qualitatively as a potential exposure route, but did not warrant a quantitative assessment because the emissions from surface soil would likely be low. This is because the most contaminated portion of the site, the buried waste lagoon, is beneath forty feet of demolition debris and is not considered a source of air risk under the current conditions." Proposed Plan at 7.

The Proposed Plan concludes that the Landfill poses no current risk to those living near it: "The RA showed that currently none of the residents living, working, or recreating or attending school near the site are exposed to any site related risks considered unacceptable by the U.S. EPA." Proposed Plan at 7.

D. FEASIBILITY STUDY

In April of 1992, U.S. EPA published the results of its FS. The FS identifies five remedial alternatives for the Skinner Landfill. The first is a "No Action" option required to be included as a basis of comparison for the other options. The remaining four identified alternatives, each of which U.S. EPA has acknowledged to be protective of human health and the environment in the long term, are described as follows:

Alternative 2: Excavation and on-site incineration of the buried lagoon; solidification of the incineration ash; capping of the incineration ash and the landfill under a multimedia cap; collection and aboveground treatment of groundwater, at an U.S. EPA estimated cost of $28,7000,000;

Alternative 3: Consolidation and multimedia capping of impacted soils; groundwater collection and aboveground treatment, at an U.S. EPA estimated cost of $15,500,000;

Alternative 4: Consolidation and capping of impacted soils with an "Ohio solid waste" clay cap; groundwater collection and aboveground treatment, at an U.S. EPA estimated cost of $14,800,000;

Alternative 5: Excavation and on-site incineration of the buried lagoon; solidification of the incineration ash; capping of the incineration ash and the landfill under a multimedia cap; collection and aboveground treatment of groundwater; treatment of VOC-contaminated soil beneath the capped area with soil vapor extraction (hereinafter "SVE"), at an U.S. EPA estimated cost of $29,000,000.

Proposed Plan at 13.

All of the alternatives excepting the "No Action" alternative contain the following common elements: institutional controls, including fencing of the Site boundaries and deed restrictions to prevent future construction, excavation and well installation; provision of an alternative water supply to families living on-Site and families downgradient of the Site having wells with the potential to become contaminated;[1] groundwater diversion including two cement-bentonite or soil bentonite slurry walls and a groundwater interceptor trench; surface and storm water diversion and flood control including capping of the buried waste lagoon, the active landfill area, and adjacent areas; grading and installation of a concrete retaining wall; and groundwater and surface water monitoring.

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[1] Fencing of the Site and the provision of an alternative water supply to families whose groundwater has the potential to become contaminated are components of the Interim Remedy proposal by U.S. EPA in August 11, 1992. Within the bounds of the Group's public comments on the Interim Remedy, which were submitted to U.S. EPA on August 31, 1992, the Group concurred in U.S. EPA's interim approach and consented to the entry of Unilateral Administration Order issued December 9, 1992. These interim remedial measures are expected to be initiated in the next few months.

While U.S. EPA found that all remedial alternatives were protective of human health and the environment, in the April 1992 Proposed Plan U.S. EPA initially selected Alternative 5 as its choice for remediating the Site. The local community expressed vehement opposition to Alternative 5 based upon the risks associated with the excavation and incineration components of this remedy. The Group also expressed its opposition to this alternative in light of these risks and the inconsistency of the Proposed Plan with the CERCLA, the National Contingency Plan (hereinafter "NCP") and U.S. EPA guidance documents.

E. U.S. EPA'S SELECTED REMEDY

In December 1992, U.S. EPA issued the Fact Sheet and informed the public that it had reevaluated its original position and was proposing Alternative 3, instead of Alternative 5, as the selected remedy for the Site. As proposed by U.S. EPA, Alternative 3 requires the installation of a multilayered landfill cap over the former dump and waste lagoon areas under which the contaminated soils from other areas from the Site would be consolidated. Slurry walls and collection trenches are proposed to be installed to control the flow of groundwater. Deed restrictions and other institutional controls would be utilized to prevent future land uses. Periodic monitoring would assure that the remedy remains protective of human health and the environment.

Despite U.S. EPA's selection of Alternative 3 as the remedy for the Site, the Fact Sheet contained several statements to suggest that U.S. EPA continues to reserve the option of requiring excavation and incineration at some time in the future, after implementation of a capping remedy. Specifically, the Fact Sheet as page 5 states: "[I]f it is shown in the future that the waste materials are migrating from this site, then it may be necessary to return to this site and incinerate the waste lagoon materials. U.S. EPA feels that it would be best to implement a containment remedy and determine whether it works first,

before resorting to the more intrusive measures set forth in alternative five (i.e., excavation and incineration)." The selection of a contingent remedy for the Skinner Landfill is wholly inappropriate and is inconsistent with U.S. EPA's own guidance documents. U.S. EPA, "Guide to Developing Superfund No Action, Interim Action and Contingency Remedy RODs" at Section 3, April 1991; U.S. EPA Guidance on Preparing Superfund Decision Documents §§5, 9 July, 1989.

F. THE GROUP'S PREFERRED REMEDY

The Group strongly supports U.S. EPA's thoughtful decision to select a capping remedy rather than excavation and incineration. The capping remedy is the most appropriate remedy for this Site inasmuch as it satisfies CERCLA and the NCP, complies with Applicable or Relevant and Appropriate Requirements (hereinafter "ARARs"), is effective in the long-term and is as permanent as the other proposed alternatives, eliminates short-term risks inherent in Alternative 5, is readily implementable, is relatively cost-effective, and is acceptable to the local community.

Notwithstanding the Group's general agreement with the selection of the capping remedy, the Group disagrees with several components of Alternative 3 that are not necessary to protect human health or the environment. For example, the Fact Sheet proposes the installation of upgradient and downgradient slurry walls as well as groundwater extraction/treatment. The unnecessary and redundant nature of upgradient/downgradient slurry walls and groundwater extraction/treatment systems are not supported by the data collected by U.S. EPA. Requiring such action to be taken is arbitrary and not consistent with CERCLA and the NCP.

Rather than the redundant and unnecessary elements of U.S. EPA's proposed Alternative 3, the Group proposes a Record of Decision ("ROD") based upon performance standards, which would be implemented in phases. The Group's Preferred Remedy for the Skinner Landfill (hereinafter "Preferred Remedy") consists of the following: a cap; groundwater monitoring; soil vapor extraction (hereinafter "SVE"), if feasible; and hydraulic containment, if necessary. This remedial approach would be implemented in phases. First, a cap would be installed over the Site and groundwater monitoring would be initiated. This

phase would include the collection of data to determine whether SVE is feasible at the Site. Second, a review of the groundwater monitoring data collected after installation of the cap (and SVE, if feasible) would provide the basis for determining whether the performance standards were exceeded. Third, if the performance standards were exceeded, appropriate hydraulic containment measures would be evaluated and implemented.

Finally, the Group disagrees with U.S. EPA's retention of Alternative 5 as a Contingent Remedy (hereinafter "Alternative 5" or "Contingent Remedy".) Alternative 5 is the most technologically complex, costly, inappropriate and potentially risky remedial alternative for cleaning up the Site. This alternative is unfair, unreasonable, is not consistent with CERCLA, is not consistent with the NCP, does not follow relevant U.S. EPA guidance, does not comply with all ARARs, is not consistent with other Region V RODs, is not protective of human health and the environment, is arbitrary and capricious, exacerbates the incurrence of response costs, and fails to accord consideration to community reaction against incineration. For the reasons outlined above, any future attempt by U.S. EPA to include incineration as part of the remedy at the Site will be vigorously opposed by the Skinner Landfill PRP Group.

G. THE GROUP'S PUBLIC COMMENTS

The following sections of this public comment contain a detailed description of the Group's specific comments on Alternative 3, Alternative 5 and the Group's Preferred Remedy. Attached for reference are the following documents: Dunn Corporation, Technical Review Comments on the Proposed Plan for Skinner Landfill, September 21, 1992 (hereinafter "Sept. 1992 Dunn Report") (Appendix A); Dunn Corporation, Technical Review Comments on The U.S. EPA Fact Sheet for the Skinner Landfill - December, 1992, February 8, 1993 (hereinafter "Feb. 1993 Dunn Report") (Appendix B) and the RODs from other Region V sites (Appendix C). The Group seizes the opportunity to provide these comments to the Agency and welcomes any questions or comments.

II. THE SKINNER LANDFILL PRP GROUP'S PREFERRED REMEDY

A. INTRODUCTION

The Skinner Landfill PRP Group commends U.S. EPA for its responsiveness to the expressed opposition of the local community to Alternative 5, the Agency's original preferred remedy for the Skinner Landfill. The Group strongly supports U.S. EPA's decision to abandon excavation and incineration and to select a capping remedy. The Group concurs in the view that a capping remedy is the most appropriate remedy for the Skinner Landfill based on its ability to satisfy CERCLA, applicable regulatory standards, and the community.

The Fact Sheet contains several statements, however, to suggest that U.S. EPA has not altogether set aside excavation and incineration and that the Agency continues to reserve the option of requiring these remedial measures some time in the future, after implementation of a capping remedy.[2/] Thus, to the extent that U.S. EPA still contemplates the possibility of incineration as a contingent remedial option for the Skinner Landfill, the Group is compelled to comment in this document upon Alternative 5.

B. A ROD BASED ON PERFORMANCE STANDARDS IS THE MOST APPROPRIATE TECHNICAL APPROACH FOR THE SKINNER LANDFILL.

1. The Skinner Landfill Is Well-suited for the Use of a ROD Containing Performance Standards.

A review of U.S. EPA's RI/FS strongly supports the conclusion that the hydrogeology, soils, and limited migration of contamination make the Skinner Landfill

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2/ "[I]f it is shown in the future that the waste materials are migrating from this site, then it may be necessary to return to this site and incinerate the waste lagoon materials . . . . U.S. EPA feels that it would be best to implement a containment remedy, and determine whether it works first, before resorting to the more intrusive measures set forth in alternative five (i.e., excavation and incineration)." Fact Sheet, p. 5.

particularly well-suited for a ROD based on performance standards. The groundwater data (which include the collection of over 100 groundwater samples on the Site over a four-year period) indicate that after more than fifteen years of uncontrolled infiltration of precipitation through the waste without any cap, there is minimal groundwater contamination. The data collected by U.S. EPA confirm that the groundwater flow rate is slow, and groundwater contamination from the Site has not migrated off-site. Sept. 1992 Dunn Report p. 1-2, 4 (Appendix A). Groundwater data from the Skinner Landfill demonstrate that the extent of contamination emanating from the buried lagoon and landfill areas is limited to the immediate vicinity of the lagoon. Sept. 1992 Dunn Report (Appendix A). In addition, U.S. EPA acknowledges that the majority of the compounds in the waste lagoon are largely immobile because they bind tightly to the clay soils below the waste lagoon. Proposed Plan p. 5. Even the more mobile compounds are not migrating from the buried waste lagoon, and such migration has been hindered by the clayey soils and because the lagoon is wholly above the water table. Proposed Plan p. 9.

2. The Preferred Remedial Design for the Skinner Landfill Is Well-suited to a Performance-based ROD.

The Group's Preferred Remedy for the Skinner Landfill consists of the following: a cap; groundwater monitoring; SVE, if feasible; and hydraulic containment, if necessary. This remedial approach would be implemented in phases. First, a cap would be installed over the Site and groundwater monitoring would be initiated. A cap will eliminate or greatly minimize the mobility and volume of the hazardous substances entering the groundwater, thus eliminating or virtually eliminating groundwater contamination. See e.g., Waste Disposal Engineering Site ROD p. 16, discussed at section VI D2, infra at 54. This first phase would also include the collection of data to determine whether SVE is feasible at the Site. Second, a review of the groundwater monitoring data collected after installation of

the cap (and SVE, if feasible) would provide the basis for determining whether the performance standards were exceeded. Third, if the performance standards were exceeded, appropriate hydraulic containment measures would be evaluated and implemented. See Feb. 1993 Dunn Report (Appendix B). Finally, any remote risk to human health from the ingestion of contaminated groundwater migrating from the Site has been eliminated by the Agency's recent order requiring potentially affected wellwater users to connect to the municipal water supply.

The performance standards that the Group recommends for the Skinner Landfill are the containment of the buried waste lagoon and the prevention of off-site releases of contaminants. The FS confirms that a cap is likely to be reliable and effective in achieving these standards. An alternate water supply has been ordered for nearby residents. The performance standards for the Skinner Landfill Site would be evaluated periodically, as provided for under CERCLA, in the five-year periodic review program. Therefore, the protection of human health and the environment will be ensured under a performance-based ROD.

3. It Would Be Arbitrary, Capricious, and Inconsistent with CERCLA and the NCP to Require Prematurely any Unnecessary and Ineffective Remedial Components.

In contrast to the Group's performance-based approach, the Fact Sheet proposes the installation of upgradient and downgradient slurry walls as well as groundwater extraction/treatment. The selection of the unnecessary and redundant upgradient/downgradient slurry walls and groundwater extraction/treatment systems is wholly unsupported by the data collected by U.S. EPA. The Agency's view that all groundwater (even clean groundwater) must be intercepted and treated overlooks the efficiencies of a performance-based approach. The SVE, if feasible, would permanently remove contaminants that have the potential for migrating to the groundwater thus eliminating or greatly minimizing the need for groundwater

treatment. In addition, it is prudent engineering practice to take advantage of the new data that would be generated after installing the cap (and SVE, if feasible) at the Site in order to enhance the effectiveness of the design of any necessary trench, slurry wall, or groundwater extraction and treatment system. For example, the precise location, configuration, and depth of such hydraulic containment systems could be more precisely and accurately evaluated and designed with the additional data.

In addition to the technical disadvantages of Alternative 3 a requirement in the ROD for upgradient and downgradient slurry walls and groundwater extraction/treatment for the Skinner Landfill would be arbitrary, capricious, and inconsistent with CERCLA. The Agency has no data to substantiate its implicit assumption that the slurry walls and groundwater extraction/treatment are necessary or cost-effective. The selection of slurry walls and groundwater extraction/treatment are not required to comply with the toxicity, mobility, or volume preference in CERCLA. 42 U.S.C. § 9621(b)(1). (See section III C1, infra p. 17, for a more detailed discussion of this preference.) U.S. EPA has recognized that a cap remedy would be consistent with CERCLA by permanently and significantly reducing the mobility and volume of hazardous substances as a principal element of the remediation. See Proposed Plan p. 18. The statutory preference for a reduction of toxicity, mobility, or volume is not a mandate to U.S. EPA to select the unwarranted and excessive measures of slurry walls and groundwater extraction/treatment. Moreover, a ROD incorporating performance standards would allow dynamic engineering evaluations to be conducted based upon the most current data. Most significantly, a performance-based ROD is entirely consistent with CERCLA, and fully complements the periodic five-year review to ensure that human health and the environment are adequately protected by the remedial action being implemented. See 42 U.S.C. § 9621(c).

III. THE SELECTION OF A CAP AS THE REMEDY FOR THE SKINNER LANDFILL IS CONSISTENT WITH CERCLA; HOWEVER, THE SELECTION OF ALTERNATIVE 5 AS THE CONTINGENT REMEDY FOR THE SKINNER LANDFILL IS SERIOUSLY FLAWED, ARBITRARY AND CAPRICIOUS, AND INCONSISTENT WITH CERCLA.

A. U.S. EPA'S REMEDY SELECTION MUST BE OVERTURNED IF IT IS ARBITRARY AND CAPRICIOUS.

The plain language of section 113(j) of CERCLA states that judicial review of U.S. EPA's remedy decision in CERCLA cases is based upon a review of the administrative record and an analysis of whether U.S. EPA's decision was arbitrary and capricious or otherwise not in accordance with the law:

> (2) Standard -- In considering objections raised in any judicial action under this Act, the court shall uphold the President's decision in selecting the response action unless the objecting party can demonstrate, on the administrative record, that the decision was arbitrary and capricious or otherwise not in accordance with the law.

42 U.S.C. § 9613(j)(2). Federal courts have consistently reviewed environmental remedies formulated under CERCLA on the basis of an arbitrary and capricious test. In re Acushnet River & New Bedford Harbor, 722 F. Supp. 888 (D. Mass. 1989); United States v. Bell Petroleum Servs., Inc., 718 F. Supp. 588 (W.D. Tex. 1989); United States v. Seymour Recycling Corp., 679 F. Supp. 859 (S.D. Ind. 1987).

Recently, the Sixth Circuit agreed that the standard of fairness, reasonableness and consistency with the statute, coupled with the arbitrary and capricious standard, is the proper test in reviewing U.S. EPA's selection of a remedy. United States v. Akzo Coatings, Inc., 949 F.2d 1409 (6th Cir. 1991). The Akzo court also stated that it must "consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment." Id. at 547 (citing Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402, 416 (1971) (applying the arbitrary and capricious test of the Administrative Procedure Act, 5 U.S.C. § 706(a)(A)).

It is in light of the foregoing standard that one must review both U.S. EPA's selection of Alternative 3 as the preferred remedy and its selection of Alternative 5 as the Contingent Remedy for the Skinner Landfill. The selection of a cap as the remedy for the Skinner Landfill is appropriate and consistent with CERCLA. However, the Agency's reference to contingently selecting Alternative 5 if Alternative 3 does "not work" violates CERCLA. Were U.S. EPA to ultimately select Alternative 5 as the remedy, the discussion that follows reveals that such selection would be arbitrary and capricious. U.S. EPA's Contingent Remedy selection is neither fair, reasonable, nor consistent with the statute. Moreover, the Contingent Remedy was not based on a consideration of all relevant factors and constitutes a serious error of judgment.

B. THE CAPPING REMEDY

1. U.S. EPA Has Recognized That Long Term Uncertainties Associated With a Capping Remedy Can Be Adequately Addressed Through Engineering and Institutional Controls.

Statute: "In assessing alternative remedial actions . . . the President shall, at a minimum, take into account: (A) long term uncertainties associated with land disposal; (B) the goals, objectives, and requirements of the Solid Waste Disposal Act [42 U.S.C. §§6901, et seq.], . . . and (G) the potential threat to human health and the environment associated with excavation . . . or containment." 42 U.S.C. §9621(b)(1).

Comment: In the Fact Sheet, the Agency appropriately recognized that the potential long term uncertainties associated with land disposal can be properly addressed to be protective of human health and the environment by implementation of engineering and institutional controls. When one considers that U.S. EPA calculated the current carcinogenic risk posed by the buried waste lagoon to be 10^{-6} to 10^{-8}, which is well within U.S. EPA's acceptable range of 10^{-4} to 10^{-7}, (see Baseline Risk Assessment (hereinafter "RA") at Figures 7, 9, 11, 13, and 15) and that U.S. EPA calculated the current non-carcinogenic risk posed by the buried waste lagoon to have a hazard index less than one (see RA at Figures 8, 10, 12, 14,

and 16), it is indisputable that a well-engineered cap could adequately address these minute potential risks over the long term.

Furthermore, the selection of a cap indicates that the goals, objectives, and requirements of the Resource Conservation and Recovery Act (hereinafter "RCRA") were taken into account in the remedy selection. A cap would attain the degree of cleanup and control that assures adequate protection. Capping complies with the letter and spirit of CERCLA and would achieve CERCLA's overriding goal of protecting human health and the environment, as the Agency's own studies recognize. See Proposed Plan p. VIII(1). A cap is relevant and appropriate to remediate a landfill site such as the Skinner Landfill. See e.g., RCRA Subtitle D. See generally U.S. EPA, "Conducting Remedial Investigations and Feasibility Studies for CERCLA Municipal Landfill Sites." Feb. 1991 (hereinafter "Landfill Guidance"). Capping is the predominant remedy selected for landfill sites. See Landfill Guidance at Appendix B. See also section VI, infra at 45. The Agency has properly concluded that a capping remedy, which is routinely selected for landfill closures under RCRA, is appropriate and effective for the Skinner Landfill.

In its contingent selection of Alternative 5, the Agency has failed to evaluate fully the risks associated with the excavation and materials handling component. These risks include the following: (1) explosion hazards from methane gas, buried flammable chemicals and buried munitions; (2) releases of pathogenic microorganisms; and (3) risks posed by particulate releases. In selecting Alternative 3, proper weight was accorded to the fact that selecting a capping remedy would avoid those unnecessary risks to human health and the environment. On the other hand, selection of the excavation remedy opens a previously incomplete pathway of exposure at the waste lagoon. By the unnecessary opening of this previously incomplete pathway of exposure, U.S. EPA's calculated carcinogenic risks increase from 10^{-6} to 10^{-8} (without excavation) to 10^{-1} to 10^{-6} (with excavation) (see RA at Figures 7-16).

2. Requiring Capping of the Active Landfill Without Verifying the Release of a Hazardous Substance from that Area Is Unauthorized Under CERCLA and Therefore Arbitrary and Capricious.

Statute: CERCLA provides that whenever a hazardous substance has been released into the environment, the President is authorized to act, consistent with the NCP, "to provide for remedial action relating to such hazardous substance. . . ." 42 U.S.C. §9604(a)(1).

Comment: The FS at §1.3.3 conceded that the active landfill area of the Skinner property "has not been thoroughly investigated as part of the Phase II RI nor previous studies, due to ongoing landfill operations at the time of the [U.S. EPA] studies." Despite the fact that not a single sample of the material in the active landfill was taken by the Agency or any other person, the Fact Sheet requires capping of the active landfill area. See Fact Sheet p. 3. The Remedial Project Manager (hereinafter "RPM") also stated that "all waste disposal is confined to a 15 acre area of the site" yet the RPM later said, without explanation, that "the actual landfill capped area will be 27 acres." Transcript of May 20, 1992 Public Hearing pp. 6, 25. U.S. EPA acted arbitrarily, capriciously and inconsistently with the express language of CERCLA in proposing remedial action for the active landfill area when there is no evidentiary basis establishing the release of a hazardous substance there. (See also discussion at Section III D, infra at 21).

C. THE FEASIBILITY STUDY AND THE SELECTION OF ALTERNATIVE 5 AS THE CONTINGENT REMEDY ARE UNFAIR, UNREASONABLE, AND INCONSISTENT WITH THE LANGUAGE AND INTENT OF CERCLA.

The following section compares CERCLA's language and intent with the investigation and actions taken at the Skinner Landfill. The conclusion to be reached from this comparison is that the selection of Alternative 5 as the Contingent Remedy is arbitrary and capricious inasmuch as it is unfair, unreasonable and inconsistent with the statute.

1. In Selecting Alternative 5 as the Contingent Remedy, the Agency Seriously Misapplied the Statutory Preference for Reduction in Volume, Toxicity or Mobility of Hazardous Substances.

Statute: "Remedial actions in which treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants as a principal element, are to be preferred over remedial actions not involving such treatment." 42 U.S.C. §9621(b)(1) (emphasis added).

Comment: A review of the FS and Proposed Plan indicates that the Agency has seriously misapplied this provision of CERCLA. The Agency appears to be misinterpreting this subsection to mean that it is compelled to select the remedy that most significantly reduces toxicity, mobility, and volume. This interpretation of CERCLA is erroneous as a matter of law. A remedial action that reduces the volume, toxicity, or mobility is consistent with CERCLA's statutory language. See generally United States v. Akzo Coatings, 949 F.2d 1409 (6th Cir. 1991). Although lip service is paid to the unambiguous language preferring a reduction of toxicity, mobility or volume, in actuality the FS and Proposed Plan impermissibly seek a reduction of all three criteria to justify the remedy selection.

Moreover, by its express terms, the statutory preference for permanent treatment is just that -- a preference -- and not a requirement. The statute specifically uses the term "preferred," rather than a term denoting a mandate or requirement. The Agency's apparent view that the only adequate treatment is the maximum treatment is thus insupportable and contrary to CERCLA's explicit language for a number of reasons. First, courts have held that section 9621's directive is "merely discretionary." See e.g., United States v. Akzo Coatings, 949 F.2d 1409 (6th Cir. 1991). Second, the NCP and U.S. EPA's own guidance documents and policies recognize that municipal landfill sites generally will be safely remediated using containment technologies rather than treatment. Landfill Guidance p. ES-1. Third, fundamental principles of statutory construction inescapably lead one to conclude that the preference for treatment is not a mandate to U.S. EPA to select the unwarranted and excessive measures in Alternative 5 and in Alternative 3 (e.g., slurry walls) for this Site. See

e.g., Bethlehem Steel Corp v. Bush, 918 F.2d 1323 (7th Cir. 1990) (in a case of statutory interpretation, the methodology is well-established, with the starting point being the language of the statute; "[i]f the statute is unambiguous, our inquiry is at an end; the congressional intent embodied in the plain wording must be enforced.") (citations omitted).

Additionally, the Proposed Plan p. 18 indicates that the Agency bifurcated its analysis by examining the reduction of toxicity, mobility and volume on each environmental media impacted at the Site -- that is, soil and groundwater. Such an analysis is contrary to CERCLA because the statute does not require that all media at a site be treated. Rather, permanent treatment is preferred to be a principal element of the overall remediation of the site.

Further, a proposed remedy designed to ensure protection of the environment against all imaginable risks is not technologically feasible nor necessary. Colorado v. Idarodo Mining, 707 F. Supp. 1227, 1239 (D. Col. 1989) rev'd 916 F.2d 1486 (10th Cir. 1990). In Idarodo, the court rejected a state's proposed plan that would have required excessive treatment, concluding that this proposal "would go too far." Id. The same could be said of applying Alternative 5 to the Skinner Landfill. Even Alternative 5 does not protect against all imaginable risks and, in fact, creates the potential for new risks. It simply would go too far in a vain effort to treat all significant contaminations at a site that will be capped in any event.

Perhaps most significantly, treating the Skinner Landfill to the maximum extent would be inconsistent with CERCLA because it ignores the greater risks posed by excavation and treatment as compared to containment. Although the FS and Proposed Plan dealing with Alternative 5 ignore the risks of excavation, U.S. EPA has expressly acknowledged their existence. At the May 20, 1992 public meeting, the RPM stated that "Alternative 3 is a capping alternative and obviously there will be less risk associated with that compared to Alternative 5" and the "major risk here is risks from excavation. Those overshadow incineration risks by far and whether we had on-site or off-site excavation, it would still occur

and that's where the majority of risks would be." Transcript of May 20, 1992 Public Hearing at p. 62, 33. CERCLA's primary goal is implementation of a remedy that is protective of human health and the environment in the long term. By failing to adequately evaluate the serious -- even life-threatening -- risks of excavation and incineration of explosive and incendiary devices, the mandates of CERCLA have been flouted by the failure to evaluate the short term effectiveness of Alternative 5.

Even if one were to accept the Agency's faulty, bifurcated analysis, U.S. EPA has recognized in its selection of Alternative 3 that a capping remedy would be consistent with CERCLA by permanently and significantly reducing the mobility and volume of hazardous substances, as a principal element of the remediation. U.S. EPA acknowledges that a cap would reduce mobility and volume. See Fact Sheet at 3; Proposed Plan at 18; Waste Disposal Engineering ROD discussed at section VI D2, infra at p. 54. Groundwater treatment, if necessary, would also reduce the volume of the contaminants. See Proposed Plan at 18; Landfill Guidance at 5-27. Finally, SVE, if feasible, in the area beneath the buried lagoon would permanently reduce the mobility and volume of potentially mobile contaminants. See Fact Sheet at 4; Proposed Plan at 18.

2. The Agency's Selection of a Contingent Remedy Fails to Comply with CERCLA's Criteria for Selection of a Remedial Alternative.

Statute: "Selection Of Remedial Action - The President shall select appropriate remedial actions determined to be necessary to be carried out . . . which are in accordance with this section and, to the extent practicable, the NCP, and which provide for cost-effective response. In evaluating the cost-effectiveness of proposed alternative remedial actions, the President shall take into account the total short- and long-term costs of such actions, including the costs of operation and maintenance for the entire period during which such activities will be required." 42 U.S.C. §9621(a) (emphasis added).

Comment: There are several ways in which there was a lack of compliance with the CERCLA requirements for selecting a remedial action. First, Alternative 5 is not an appropriate or necessary remedy for the Skinner Landfill. No other ROD for a Region V -

Ohio landfill site has selected incineration as a remedy. Landfill Guidance at Appendix B. See also discussion of RODs at section VI, infra, p. 45. Second, as discussed in the preceding sections, Alternative 5 does not comply with 42 U.S.C. §9621. Third, Alternative 5 was not selected in a manner consistent with the NCP. See section IV, infra, p. 23.

Finally, Alternative 5 is not a cost-effective remedial action. The NCP requires U.S. EPA to select a cost-effective remedy. 40 C.F.R. §300. 430(f)(i)(ii)(D). The NCP, at 40 C.F.R. §300.430(e)(G)(7)(iii), discusses cost as follows:

> The cost of construction and any long term costs to operate and maintain the alternatives shall be considered. Costs that are grossly excessive compared to the overall effectiveness of alternatives may be considered as one of several factors used to eliminate alternatives. Alternatives providing effectiveness and implementability similar to that of another alternative by employing a similar method of treatment or engineering control, but at a greater cost, may be eliminated.

All of the remedial alternatives identified in the FS are protective of human health and the environment. See Proposed Plan at 16. The incineration alternatives have the most implementation obstacles and a grossly excessive cost of about $88.5 million. See Sept. 1992 Dunn Report p. 24 (Appendix A) when compared to U.S. EPA's estimates of $14.8 to $15.5 million for capping alternatives. FS p. 5-27. Therefore, had the cost-effectiveness analysis been properly conducted, the incineration alternative would have been either eliminated from consideration or not selected as the Contingent Remedy.

3. The Mandates of CERCLA Were Ignored by the Agency's Failure to Provide a Clear Statement of the Basis and Purpose of Alternative 5.

Statute: The Agency is required to provide "[a] statement of the basis and purpose of the selected action." 42 U.S.C. §9613(k)(2)(B)(iv).

Comment: The Agency has failed to provide a clear statement of the basis and purpose of Alternative 5. For example, when a neighborhood resident asked this precise question of the Agency at the public meeting held in May, 1992, the brief response was simply

that the Superfund Amendments and Reauthorization Act of 1986 (hereinafter "SARA") preferred treatment. If this is the basis for the selection of Alternative 5, the selection was not done in accordance with the NCP and CERCLA. See preceding paragraphs of this section and section IV, infra at 23.

D. U.S. EPA'S FEASIBILITY STUDY FAILS TO PROPERLY AND SUCCINCTLY DEFINE AND DELINEATE THE "SITE" AND/OR "FACILITY" AND AS SUCH, IS INCONSISTENT WITH CERCLA

The Agency states that Alternative 3 will include a multilayered cap over approximately 28 acres of the total 78 acres of the property. The description of the cap in the FS is as follows: "The capped area under Alternative Three (as under all Alternatives) would consist of the buried waste lagoon, the recently active fill area, and adjacent portions of the site as necessary to ensure that capping is performed with appropriate grades and controls to minimize erosion, minimize infiltration and accommodate the site topography." FS at 5-23. U.S. EPA has publicly acknowledged that the contaminated portion of the property consists of approximately the 15 acres composing the buried waste lagoon and the inactive landfill area. U.S. EPA has also required in a Unilateral Administrative Order issued to the PRPs, the implementation of the institutional control of fencing surrounding approximately 15 acres of the property. Neither the Fact Sheet nor the FS properly and succinctly defines and delineates the "site" and/or "facility" as those terms are defined in CERCLA and the NCP. U.S. EPA's failure to properly and succinctly define and/or delineate the site or facility in either the Fact Sheet or FS results in a proposed remedy which exceeds the actual contaminated areas of the property and therefore is arbitrary, capricious and inconsistent with CERCLA and the NCP.

CERCLA and the NCP set forth the definition of "facility" to mean:

> (A) Any buildings, structure, installation, equipment, or pipeline including any pipe into a sewer or publicly owned treatment works, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a

> hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

42 U.S.C. §9601(9); 40 C.F.R. §300.5. The term "facility" has been interpreted by the courts, pursuant to CERCLA, to mean every place where hazardous substances come to be located. United States v. Conservation Chemical Company, 619 F.Supp. 162, 184-85 (E.D. Mo. 1985).

However, even in cases where courts have commented that the definition of facility was intended to be broad, the courts have recognized that a facility extends only to where the hazardous substance is located. See United States v. Bliss, 667 F.Supp. 1298, 1305 (E. D. Mo. 1987) ("[T]o show that an area is a facility, the plaintiff need only show that a hazardous substance has been placed there or has 'otherwise come to be located' there."); United States v. Stringfellow, 661 F.Supp. 1053, 1059 (C.D. Cal. 1987); United States v. Northeastern Pharmaceutical and Chemical Co., 810 F.2d 26, 742-43. (8th Cir. 1986). Consequently, the borders of the facility lie at or near where the contamination ends. This interpretation is consistent with the definition of on-site in the NCP, which means the "areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action." 40 C.F.R. §300.5 (emphasis added).

The FS, at section 1.3.4, states that "[t]he results of chemical analyses completed on samples collected during the Phase II RI confirmed that the buried waste lagoon is the primary source of contaminants at the Skinner site." Furthermore, the FS in section 1.3.3, ("Contaminant Sources"), states that the buried waste lagoon is the largest and most significant known source of contaminants on the property. The FS further proceeds to state that "the most recently active landfill area is also suspected as a source of contamination. However, this area has not been thoroughly investigated as part of the Phase II RI nor previous studies, due to ongoing landfill operations at the time of the studies."

Despite the conclusions in the FS identifying the alleged extent of contamination as primarily the buried waste lagoon as well as potentially the inactive landfill area, Alternative

3 extends remedial activities well beyond the boundaries of the known contaminated area into undefined or uncharacterized portions of the property including adjacent property north of the landfill property. U.S. EPA's proposal to cap 28 acres instead of the 15 acre area that is allegedly contaminated, as indicated by the sampling results, is clearly beyond the scope of CERCLA or the NCP. Moreover, the U.S. EPA's failure to adequately and accurately define the site and/or facility at the Skinner Landfill is inconsistent with the cost-effective standard set forth in CERCLA and the NCP. U.S. EPA's assumption that the site and/or facility extends beyond the actual contaminated portions of the property only serves to increase the costs of the final remedy and is contrary to the intent of CERCLA and the NCP.

IV. THE NEW PREFERRED CAPPING REMEDY IS CONSISTENT WITH THE NCP; HOWEVER, ALTERNATIVE 5 IS INCONSISTENT WITH THE NCP.

In the NCP, nine criteria for selection of a remedy are specified.[3/] 40 C.F.R. § 300.430(e)(9)(iii). An application of these criteria to the conditions at the Site clearly indicates that capping, rather than incineration, is the only appropriate remedy for the Skinner Landfill. Incineration is: (1) not protective of human health and the environment overall; (2) not able to comply with all Applicable or Relevant and Appropriate Requirements (hereinafter "ARARs"); (3) not effective in the short-term; (4) not readily implementable; (5) not cost-effective; and (6) not acceptable to the community. A capping alternative, however, can meet all the requirements of the NCP and is the only appropriate selection.

Although Alternative 3 selects a cap remedy, it includes certain components that are not necessary to protect human health or the environment. Alternative 3 includes two

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[3/] The nine criteria specified by the NCP for evaluation of remedial alternatives are: (A) overall protection of human health and the environment; (B) compliance with ARARs; (C) long-term effectiveness and permanence; (D) reduction of toxicity, mobility or volume through treatment; (E) short-term effectiveness; (F) implementability; (G) cost; (H) state acceptance; and (I) community acceptance. 40 C.F.R. § 300(e)(9)(iii).

slurry walls, collection and treatment of groundwater, and, potentially, SVE to reduce contamination of soils that could impact the groundwater. To the extent these elements are not necessary, they are not proper under CERCLA and are inconsistent with the NCP. A more cost-effective approach would be the performance-based, phased approach which is the Group's Preferred Remedy and is more fully described in the Sept. 1992 Dunn Report (Appendix A).

A. INCINERATION IS NOT AS PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT AS CAPPING.

Protection of human health and the environment is a threshold requirement for selection of a remedial action alterative under the NCP. 40 C.F.R. § 300.430(f)(1)(i)(A). If a remedy is not protective of human health and the environment, it is not eligible for selection. The FS states that "all alternatives except No Action are expected to be protective of human health and the environment." FS p. 5-37. See also, Proposed Plan p. 16. This statement correctly indicates that a capping remedy will meet this threshold criterion, but quickly glosses over serious potential short-term health and environmental risks associated with incineration at this Site -- risks that preclude incineration from being sufficiently protective of human health and the environment and thus ineligible for selection.

Incineration-based remedies at this Site pose a number of potential short-term risks. At a minimum, excavation and incineration will produce an increase in the volatilization of chemicals in the soil and a concomitant increase in potential health risks to site workers as well as residents and schoolchildren in the areas surrounding the Site. The levels of such risks will exceed those deemed acceptable by U.S. EPA.

Therefore, while all remedies except No Action may be protective of human health and the environment in the long-term, only the capping alternatives are protective in

the short-term. U.S. EPA's selection of a capping remedy-based alternative, therefore, is the only appropriate course of action under this threshold criterion of the NCP.

Moreover, capping and groundwater monitoring, without immediate implementation of groundwater treatment or slurry walls is fully protective of human health and the environment at this Site. There has been no demonstration of off-site migration of groundwater even though no preventive measures have been in place for years. The multilayer cap proposed by U.S. EPA will eliminate or greatly reduce migration of the groundwater still further and the groundwater monitoring will ensure that, should current conditions change, there will be ample warning and opportunity to prevent off-site migration of contamination through use of some or all of the additional elements proposed by U.S. EPA. Current data, however, indicate that such a scenario is unlikely. Finally, it is manifest that the risk posed by groundwater migration, if any, has been substantially mitigated by the recent installation of an alternate water supply to potentially affected residences.

B. ONLY CAPPING REMEDIES COMPLY WITH LOCATION-SPECIFIC ARARs.

The second threshold criterion under the NCP is compliance with ARARs. 40 C.F.R. § 300.430(f)(i)(A). The FS states that "all alternatives, with the exception of the No Action alternative, would be expected to achieve chemical-specific ARARs for surface water and chemical-specific criteria for surface water sediments." FS at 5-37. It also admits that under all alternatives some soils would not achieve chemical-specific ARARs. Id. at 5-38, 5-39. Moreover, the FS acknowledges that capping alternatives meet all action-specific ARARs. Id. at 5-39. See also Proposed Plan p. 17.

Alternative 3 meets all location-specific ARARs, while incineration alternatives cannot meet Ohio requirements for location of new hazardous waste incinerators. See Ohio Rev. Code § 3734.05. Moreover, U.S. EPA has not justified a waiver to these requirements.

See 40 C.F.R. §§ 330.430(e)(9)(iii)(B), 300.430(f)(ii)(C). Accordingly, a capping remedy is the only appropriate selection under this criterion of the NCP.

C. ALL ALTERNATIVES ARE EQUALLY EFFECTIVE IN THE LONG-TERM AND EQUALLY PERMANENT.

The third criterion of the NCP is long-term effectiveness and permanence. A performance-based approach featuring a cap and groundwater monitoring, with additional elements if necessary, meets this requirement. As the FS itself notes, all alternatives considered by EPA include long-term groundwater monitoring, FS at 5-39, and all require reevaluation of the remedy at least every five years. Fact Sheet at 5. Incineration will result in ash which may be hazardous and which would be landfilled at the Site, requiring long-term maintenance of a waste landfill similar to that required under any capping alternative. Additionally, due to the necessity of solidifying the ash from incineration, the actual volume of waste at the Site will increase. Furthermore, Alternative 3 requires detailed monitoring for potential migration from the Site into the groundwater. Fact Sheet at 5. With a performance-based approach, this same detailed monitoring can be used to assess which, if any, additional controls are appropriate in the unlikely event current Site conditions change. Because there has been no demonstration of off-site migration of contaminated groundwater, it is arbitrary to require steps to stop such migration at this time.

Moreover, capping is a permanent remedy. Capping at this Site, even with no maintenance, will effectively prevent direct contact with contamination for 8,300 years. Sept. 1992 Dunn Report p. 25 (Appendix A). To put this in perspective, consider that it was only approximately 8,000 years ago that man first invented the wheel.[4/] Capping, therefore, provides an effective long-term and permanent remedy for conditions at the Skinner Landfill.

[4/] 1992 Information Please Almanac at 89.

D. TREATMENT TO REDUCE TOXICITY, MOBILITY OR VOLUME CAN BE EFFECTIVELY USED WITH ALL ALTERNATIVES.

Reduction of toxicity, mobility or volume through treatment is the next NCP criterion. It is important to note that treatment is a preference under the NCP, not a requirement. 40 C.F.R. § 300.430(f)(1)(i)(B). Furthermore, this criterion must be considered a balancing criterion. As acknowledged in the FS and the Proposed Plan, use of a cap, without any soils treatment, will fully protect human health and the environment. In addition, a cap will significantly reduce the mobility and volume of on-site contaminants without treatment. FS at 5-41. This is because capping, by effectively eliminating infiltration of precipitation through the waste, removes the only currently active migration pathway for contaminants at the Site. In addition, U.S. EPA has acknowledged in other RODs that capping reduces the volume of contaminants by preventing water from coming in contact with waste. See section VI, infra at 45.

To the extent monitoring results may at some time indicate that treatment is desirable at the Site, a performance-based approach allows for consideration of SVE, trench systems, groundwater treatment, slurry walls, and/or other treatment alternatives, as appropriate. Incineration, of course, is one type of treatment for soils. It is not, however, the only, or even the best, type of treatment for use at the Site. Unlike capping, incineration will actually increase the volume of hazardous waste through solidification of ash,[5/] and, in the short term, will also significantly increase the potential for releases of chemicals through excavation. In addition, U.S. EPA recognizes that incineration will pose numerous other potential health and environmental risks, including increased soil erosion, hazardous air emissions, noise and/or odor

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[5/] The incineration fact sheet distributed by EPA at the July 29 public meeting indicates that incineration reduces the volume of wastes. Superfund Fact Sheet, On-Site Incineration of Hazardous Wastes, April 1991 at 1. This statement, however, is inconsistent with information in EPA's own Landfill Guidance Document. That document indicates that incineration "may result in little or no reduction in volume." Id. at 4-16. In fact, when ash from the Skinner Landfill is solidified, the volume of waste will be increased.

problems, and contamination of soil or water from natural disposition. See Sept. 1992 Dunn Report, section 3.3.3. (Appendix A).

E. CAPPING ELIMINATES SHORT-TERM RISKS.

The FS and the Proposed Plan, when discussing EPA's original preferred alternative, Alternative 5, do not adequately address the fifth criterion of the NCP, short-term effectiveness. While the FS acknowledges that the incineration alternatives at this Site "may cause additional risks," and concedes that the capping alternatives are "expected to be somewhat more effective in preventing short-term risks," it does not discuss the particular risks involved or provide an adequate comparison of risks under the two types of remedies. FS p. 5-41. U.S. EPA, in reconsidering its preferred alternative, has ensured that significant short-term risks to the community will be avoided.

Specifically, neither the FS nor the Proposed Plan adequately address the significant dangers associated with attempting to excavate potentially buried military weapons, including alleged explosives, combustibles, flammables, munitions, and poison gases. Because it is not known where military materials may be buried, excavation could result in serious injury -- or even death -- to workers, residents, or schoolchildren in areas surrounding the Site. Excavation could also result in serious environmental damage. These risks will be avoided entirely with a capping-based remedy, which, while fully protecting long-term health, will allow any such material to remain undisturbed and ensure the present and future health and safety of the community. In addition, capping avoids opening new exposure pathways at the Site and creating a significant possibility of airborne contamination, such as volatile organic compounds (hereinafter "VOCs"), pathogenic microbial agents, and particulates. Moreover, capping eliminates the potential for problems or malfunctions which could arise with the operation of the incinerator, thereby potentially exposing citizens to unauthorized discharges from the

incinerator, or extending the period during which they are exposed to other risks as the incinerator sits idle awaiting repair.[9]

In sum, capping alternatives create no new risks, can be implemented quickly, and can effectively protect health and the environment in the short-term. Capping, therefore, is the only appropriate remedial selection under this criterion of the NCP.

F. CAPPING IS READILY IMPLEMENTABLE.

The NCP lists specific factors for considering implementability. It states that implementability shall be assessed by considering the following types of factors:

> (1) Technical feasibility, including technical difficulties and unknowns associated with the construction and operation of a technology, the reliability of the technology, ease of undertaking additional remedial actions, and the ability to monitor the effectiveness of the remedy.
>
> (2) Administrative feasibility, including activities needed to coordinate with other offices and agencies and the ability and time required to obtain any necessary approvals and permits from other agencies (for off-site actions).
>
> (3) Availability of services and materials . . .

40 C.F.R. § 300.430(e)(9)(iii)(F).

While an incineration-based remedy would encounter significant difficulties under each of these factors, a capping-based remedy is readily implementable in a comparatively short time frame. The technologies for both capping and monitoring have been well established for a number of years and have been used successfully at numerous sites. There do not appear to be administrative roadblocks or problems associated with acquiring the necessary services or materials. A cap can be designed and installed in as little as one to two construction seasons, without the testing and approval phases, siting issues, or other concerns involved in incineration. In addition, a cap can be installed without creating additional health risks which

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themselves require implementable responses. Therefore, a cap is much more readily implementable than incineration.

G. A PERFORMANCE-BASED CAP IS THE ONLY COST-EFFECTIVE ALTERNATIVE.

The NCP states that "[e]ach remedial action selected shall be cost-effective, provided it first satisfies the threshold criteria . . ." 40 C.F.R. § 300.430(f)(1)(ii)(D) (emphasis added). Therefore, not only must the selected remedy meet threshold criteria it must also be cost-effective in order to comply with the NCP. While a capping alternative is significantly more cost-effective than incineration, EPA's Alternative 3 includes some elements which are not necessary to protect human health and the environment. Because the elements significantly increase cost without adding any benefits, they are not cost-effective and are therefore inconsistent with the NCP.

To determine cost-effectiveness, cost is balanced against overall effectiveness, as measured by long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, and short-term effectiveness. Id. As described herein, a performance-based capping approach, which begins with a cap and groundwater monitoring, and adds additional elements only if data support such a move, provides long-term effectiveness and permanence, reduction of toxicity, mobility or volume, and short-term effectiveness. Because there are currently no data to demonstrate off-site migration of contamination or otherwise support the need for additional measures in order to protect human health or the environment, implementation of additional measures at this time provides no additional benefit, but substantially increases cost. Such an approach is arbitrary and not cost-effective and therefore inconsistent with the NCP.

H. STATE ACCEPTANCE IS CURRENTLY UNKNOWN.

The State of Ohio has not issued an authorized statement regarding its reaction to the selected remedy. Therefore, the State's acceptance of the Agency's selected remedy and Contingent Remedy is unknown.

I. ONLY A CAPPING BASED REMEDY IS ACCEPTABLE TO THE COMMUNITY.

The NCP requires that community acceptance be considered in selection of a remedial activity. At public meetings in the community affected by the Skinner Landfill, citizens voiced strong opposition to an incineration remedy. Indeed, the community has had experience with incineration in their neighborhood and they have not been pleased with the results. After thoughtful consideration of the issues involved, a united coalition of various facets of the community stated its firm opposition to incineration and its support for capping. It was largely in response to this public outcry that U.S. EPA appropriately reassessed its Alternative 5 and has selected a capping-based approach. For a more detailed discussion of the community reaction, see section VII, infra at 72.

J. CAPPING THE ACTIVE LANDFILL AREA IS INCONSISTENT WITH THE NCP.

The Skinner Site includes a landfill area which was active as recently as August 1990. FS p. 1-6. All the remedial alternatives considered by U.S. EPA include capping this area. Plan at 13. However, due to the fact that U.S. EPA permitted on-going landfill activities at this portion of the Site while they were studying hazardous contamination at older portions of the Site, the recently active sections of the landfill have not been studied at all. FS at 1-8. Therefore, because U.S. EPA has demonstrated no risk from this area of the

landfill, it has no authority to require remediation. This portion of all the considered alternatives, therefore, is inconsistent with NCP.

In conclusion, the Group believes that U.S. EPA has appropriately moved away from an incineration to a capping remedy. A cap will fully protect human health and the environment, will comply with all ARARs, be effective in both the long and short terms, provide a permanent remedy, reduce toxicity, mobility or volume of contamination, is easily implementable, and is acceptable to the community. Alternative 3, however, is inconsistent with the NCP to the extent it calls for unnecessary elements and is not cost-effective. Although significantly more cost-effective than incineration, requirements of slurry walls and groundwater treatment are not supported by data and therefore not cost-effective. A more appropriate approach would be to require implementation of a cap and groundwater monitoring at this time, with later imposition of further remedial activities if conditions at the Site change and data reveal that groundwater contamination is migrating off-site.

V. THE FEASIBILITY STUDY AND SELECTION OF ALTERNATIVE 5 AS THE CONTINGENT REMEDY WERE ARBITRARILY AND CAPRICIOUSLY PERFORMED, AND NOT CONDUCTED CONSISTENTLY WITH U.S. EPA'S OWN GUIDANCE DOCUMENTS.

At the outset, we note that Agency guidance documents do not have the legal impact of statutory or regulatory requirements. In fact, on occasion, the provisions of guidance documents have been challenged as unlawfully inconsistent with CERCLA and in violation of the Administrative Procedures Act. See generally, United States v. Kramer, 757 F. Supp. 397, 435 (D.N.J. 1991). With these reservations, we note for the record that the Agency's performance of the RI/FS and selection of Alternative 5 were inconsistent with its own guidance documents. The following sections provide detailed examples of the Agency's arbitrary and capricious assumptions and analyses, which demonstrate the Agency's failure to

follow its own guidance documents. For further discussion of the arbitrary and capricious standard, see section III, supra, at 13.

A. FOUR CRITICAL ASSUMPTIONS THAT WERE ARBITRARILY MADE INESCAPABLY RESULTED IN THE FLAWED SELECTION OF ALTERNATIVE 5 AS THE CONTINGENT REMEDY, WHICH IS INCONSISTENT WITH THE NCP AND U.S. EPA GUIDANCE DOCUMENTS.

Several outcome-determinative errors were made in the RI/FS process that, in the aggregate, inevitably caused the flawed selection of Alternative 5 for the Skinner Landfill as presented in the Proposed Plan and, now, as the Contingent Remedy in the Fact Sheet. The erroneous assumptions made include the following: 1) a hot spot exists at the buried waste lagoon; 2) the hot spot poses a principal threat; 3) the calculated current carcinogenic and non-carcinogenic risks posed by the buried waste lagoon, although within U.S. EPA's acceptable ranges, require treatment; and 4) the excavation and handling of materials do not pose a significant risk to the community or site workers. Had reasoned assumptions been made that were consistent with the NCP and the Agency guidance documents, rather than the arbitrary ones that were chosen, the remedy selected by the Agency would have necessarily been a capping remedy, and incineration at the Skinner Landfill would have been summarily rejected. See West KL Landfill ROD discussed at section VI D3, infra at 60 (because no "hot spots" were identified at the landfill, alternatives involving treatment or removal of the waste were rejected in the FS and not carried forward to a remedial alternative). A detailed discussion of these points follows.

does not contain discrete accumulations of liquid hazardous waste, nor is it in an accessible location because the buried lagoon is entombed under at least twenty feet of demolition debris. Third, the "hot spot" definition expressly applies to "wastes" and not soils. Thus, there is no basis for treating the buried lagoon.

Moreover, the buried lagoon does not present a principal threat to "human health and the environment." According to U.S. EPA, for environmental media to be considered "impacted," the risks must exceed the carcinogenic range of 10^{-4} to 10^{-6} or the non-carcinogenic hazard index of one. FS p. 3-1. If the buried lagoon is left undisturbed, the potential risk to human health was calculated by U.S. EPA to be 10^{-6} to 10^{-8}, well within the Agency's acceptable range of 10^{-4} to 10^{-7}. See RA at Figures 7, 9, 11, 13 and 15. Further, because the current hazard indexes are less than 1, there is no adverse impact on the environment. See RA at Figures 8, 10, 12, 14, and 16. Thus, using U.S. EPA's own conservative standards, the RI/FS demonstrates unequivocally that the buried lagoon does not present a principal threat to human health and the environment.

Finally, Alternative 5's incineration of the buried lagoon will not result in a significant reduction of risk posed by the overall Site. The wastes are heterogeneous, and based on observations made in 1976, there were drums scattered throughout the Site. FS p. 1-4. There are no data to support U.S. EPA's assumption that the drums disposed of at the landfill were filled with hazardous wastes. Further, U.S. EPA did not dispute the community's observation that incineration would treat only 10% - 20% of all of the waste at the Skinner Landfill. (July 29, 1992 public meeting). Consequently, the excavation and treatment of the lagoon's contents are inconsistent with U.S. EPA's Landfill Guidance. See also Buckeye Landfill ROD, discussed at section VI D1, infra at 48 (because of the heterogenous nature of the landfill, treating the waste pit will not significantly reduce site risks); Waste Disposal Engineering ROD discussed at section VI D2, infra at 54 (EPA did not require treatment of a

hazardous waste pit at a landfill where the pit represented 10% of the wastes and its treatment would not significantly reduce site risks).

The function of hot spot management is to prevent direct and dermal contact with and ingestion of contaminated soil or landfill contents. Landfill Guidance at 2-20, Table 2-2. The lagoon's entombment under at least twenty feet of debris ensures no direct contact. The objective of hot spot management can be completely and safely achieved at the Skinner Landfill by installing a cap. Landfill Guidance at Fig. 2-5.

4. The Risks of Excavation Were Not Evaluated Adequately.

Document: "Additionally, excavation of a landfill may cause greater risks than it prevents." Id. at 2-21. Such risks include: a) release of VOCs into the atmosphere, thereby threatening residents, b) fire and explosions from methane gas, and c) fire and explosions from flammable drum contents. Id. at Table 2-3. "Care must be exercised because drilling through the landfill to install the monitoring wells could . . . puncture isolated drums, or penetrate a gas pocket, causing an explosion hazard." Id. at 3-7 "Potential exposure to workers and nearby communities during excavation must be considered." Id. at 4-13.

Comment: Despite U.S. EPA's attempt to model the risks of volatilization during on-site excavation (see FS at App. III), U.S. EPA arbitrarily and capriciously failed to evaluate and fairly consider in its Contingent Remedy selection all potential risks of excavation posed by Skinner Landfill. This omission is not consistent with U.S. EPA's Landfill Guidance, and had the effect of underestimating the potential risks of Alternative 5.

5. Explosive Hazards Were Not Adequately Evaluated in the FS or the Contingent Remedy Selection.

Document: "The goal of landfill gas characterization is . . . [to] perform an assessment of human health risks due to air toxic and explosive hazards . . . ." Id. at 3-25.

Comment: The FS and the Contingent Remedy selection failed to evaluate explosive hazards and all short term potential risks in accordance with the Agency's own guidance document.

6. The Agency Failed to Examine RODs of Other Region V-Ohio Sites.

Document: Records of Decision for other Superfund sites are "valuable for remedy selection purposes." Id. at 2-21. The RPM should use Appendix B of the Landfill Guidance to identify sites within his or her region for which the same technologies were considered. Id.

Comment: A review of Appendix B of the Landfill Guidance reveals that there have been no Region V - Ohio landfill sites in which EPA has selected incineration as the remedy. The FS has conducted arbitrarily and inconsistently with U.S. EPA's own guidance document by identifying incineration in Alternatives 2 and 5 without any reference to or discussion of similar sites within Region V for which capping remedies were selected. See further discussion of Region V RODs at section VI, infra at 45.

7. Incineration Will Increase the Volume of Hazardous Waste.

Document: Incineration "may result in little or no reduction in volume . . . ." Id. at 4-16.

Comment: U.S. EPA concedes in its own guidance document that incineration may not result in any volume reduction.[7/] In fact, when all of the elements of Alternative 5 are considered in the aggregate, the solidification of the incinerator ash confirms that incineration at Skinner Landfill will actually increase the volume, not reduce it. In contrast to incineration, a cap would greatly reduce the volume (and mobility) of the hazardous substances.

7/ In contrast to this statement, U.S. EPA distributed a Superfund Fact Sheet at the July 29, 1992 public meeting which states in pertinent part "[Incineration] reduces the volume of the wastes. . . ." U.S. EPA, "Superfund Fact Sheet On-Site Incineration of Hazardous Wastes - Questions and Answers (Region V, Apr. 1991) at p. 1." See also section IV D, infra at 27, footnote 5.

8. The FS Failed to Properly Evaluate the Reduction in Toxicity, Mobility or Volume of Each Remedial Alternative.

Document: CERCLA's preference for a reduction in mobility or volume "can also be [accomplished] through treatment of groundwater, leachate, or landfill gas." Id. at 45-27.

Comment: The FS failed to comply with U.S. EPA's own guidance in evaluating the remedial alternatives. According to U.S. EPA, all remedial alternatives comply with the preference for reduction in toxicity, mobility or volume, but U.S. EPA arbitrarily selected a Contingent Remedy, Alternative 5, that purportedly results in the maximum reduction of toxicity, mobility, and volume. However, contrary to this contention, incineration at Skinner Landfill increases, not decreases, waste volume. A capping remedy is most consistent with CERCLA and U.S. EPA's own guidance documents.

9. The FS Failed to Include a Risk Assessment For Comparison of the Identified Remedial Alternatives.

Document: "The risk assessment for comparison of remedial alternatives is designed to identify potential threats to human health or the environment that may arise from the execution of various types of remediation activities." Id. at 2-18.

Comment: A risk assessment for comparison of the four remedial alternatives was not performed by in the FS, which is inconsistent with U.S. EPA's own guidance document. Had such an assessment been properly performed, it is highly probable that a cap would have been selected originally for Skinner Landfill.

10. U.S. EPA Failed to Conduct Interviews with All Persons Knowledgeable about the Skinner Landfill.

Document: "Interviews with state inspectors, local government bodies, and local residents . . . " should be performed to scope the RI adequately. Id. at 2-2.

Comment: It was apparent from the May 20 and July 29, 1992, public meetings that the Agency had failed to conduct interviews with all persons knowledgeable about the Skinner Landfill's operations. It appears that the owner/operator was not thoroughly interviewed or deposed prior to his death. The failure to timely comply with its own guidance document has resulted in an inaccurate understanding of Site conditions. Such a failure to accurately and thoroughly evaluate Site conditions necessarily results in a flawed RI/FS and an arbitrarily selected Contingent Remedy. See, e.g., Landfill Guidance at 2-6, 2-9.

11. The RI/FS Inadequately Characterized the Waste at Skinner Landfill for the Purpose of Supporting the Contingent Remedy.

Document: "Significant effort should be expended in detailing the specifics of disposal activities and types and quantities of wastes." Id. at 2-7.

Comment: Waste characterization information is used to "direct the RI/FS process and the selection of the remedial action alternatives." Id. at 2-9. There is no indication from the RI/FS or the public meetings that the Agency complied with its own guidance document to the extent necessary to support its selection of Alternative 5. Although the Agency's characterization of the Skinner Landfill was inadequate to support Alternative 5, the existing data adequately support the selection of a capping remedy.

12. The RI/FS Did Not Lead To The Selection Of A Cost-Effective Remedy.

Document: "If . . . remedial action is necessary, the objective of the RI/FS is to select a cost-effective remedial action that minimizes or eliminates exposure to contaminants from the landfill." Id. at 2-23.

Comment: In violation of EPA's own guidance document, the Contingent Remedy, Alternative 5, is one that is not cost-effective nor does it minimize the risk of

exposure to contaminants and other hazards. (See discussion at section IV, G, above regarding cost effectiveness.)

C. OTHER U.S. EPA GUIDANCE DOCUMENTS AND POLICIES.

1. The Risk Assessment Was Not Done In Accordance With U.S. EPA's Own Policies.

Document: "Whenever there is a release or a substantial threat of release of a hazardous substance into the environment Section 104(a)(1) of CERCLA provides EPA with the authority to take any response action consistent with the [NCP] . . . . As a general policy and in order to operate a unified Superfund program, EPA uses the results of the baseline risk assessment to establish the basis for taking a remedial action using either Section 104 or 106 authority." U.S. EPA Memorandum, "Role of the Baseline Risk Assessment in Superfund Remedy Decisions," April 22, 1991 at p. 3.

Comment: The risk assessment performed for the Skinner Landfill was not done in accordance with U.S. EPA's own policies (see, e.g., Memorandum, Guidance on Risk Characterization for Risk Managers and Risk Assessors from F. Henry Habicht, Deputy Administrator, U.S. EPA, February 26, 1992). Although the February 26, 1992 memorandum was issued after the Risk Assessment was conducted, the memorandum's guidance is not new. Rather, it restates, clarifies, and expands upon current risk assessment concepts and practices, and emphasizes aspects of the process that are often incompletely developed. Id. at 3. Further, the risk memorandum was issued before the FS and Proposed Plan were released to the public, thus providing an opportunity for re-evaluation of the risk posed by the Skinner Landfill prior to the public comment period.

Furthermore, the risk assessment contains key flaws. The exposure scenario and exposure point concentration assumptions are unrealistic and inappropriate. For example, as discussed in the following subsection, the Agency assumed future residential use of the buried lagoon and the Site even though it admitted that such an assumption was unrealistic. By evaluating unrealistic scenarios such as this, the Agency obscured the actual risks posed by the

Site.[8] Additionally, with regard to the future use scenario for creeks, the Agency assumed a swimming exposure route even though a wading exposure route is more appropriate due to the depth of the creek. This unrealistically overstated the possible amount of exposure and therefore the risk. Because the exposure scenario is one of the first steps in a risk assessment, the errors mentioned here and other errors rippled through the risk assessment and these flaws are carried through the entire document and Contingent Remedy selection.

2. U.S. EPA's Assumption Of Future Residential Land Use Is Insupportable.

Document: "[T]he assumption of future residential land use may not be justifiable if the probability that the site will support residential use in the future is small." Memorandum, April 22, 1991 at 5.

Comment: According to U.S. EPA, remedial actions were "proposed for each [environmental] medium which contains levels of contaminants expected to cause carcinogenic risks in excess of the [acceptable] 10^{-4} to 10^{-6} risk range, [or] non-carcinogenic risks in excess of a hazard index of 1.0 . . . ." FS at 3-1.

Using U.S. EPA's own calculations, the current and future (with no residential development in the lagoon) scenarios demonstrate that both carcinogenic and non-carcinogenic risks are within the acceptable range without any treatment:

	Carcinogenic Risk
Occupational Adult	10^{-6} - 10^{-8}
Residential Child	10^{-6} - 10^{-8}
Residential Adult	10^{-6} - 10^{-7}
Recreational Child	10^{-6} - 10^{-8}
Recreational Adult	10^{-6} - 10^{-7}

[8] As represented to U.S. EPA at the July 29, 1992 public meeting, the Agency overestimated the risks of the buried lagoon and underestimated the risks of incineration.

	Hazard Index
Occupational Adult	less than 1.0
Residential Child	about 1.0
Residential Adult	less than 1.0
Recreational Child	less than 1.0
Recreational Adult	less than 1.0

See Baseline Risk Assessment at Figures 7-16.

It is ironic that U.S. EPA proposes a Contingent Remedy that will open a currently closed pathway of exposure by excavating the buried lagoon and thereby increase dramatically increase (according to U.S. EPA's own calculations) the carcinogenic and non-carcinogenic risks. EPA's failure to quantify the increase in all potential risks that may be caused by Alternative 5 is yet another illustration of the Agency's arbitrariness and inconsistency with the NCP and its own guidance documents.

Faced with calculations that indicate that no significant risk is posed by the buried lagoon, the FS and Contingent Remedy strain to justify the incineration remedy by assuming a future residential development of the buried lagoon scenario.[9] The Agency's arbitrary and insupportable assumption that there will be future residential development at the buried waste lagoon has no basis in fact or science, nor in CERCLA, the NCP, or U.S. EPA's own guidance documents and policies. U.S. EPA's RPM stated at the public meeting on May 20, 1992 that the assumption of future residential use of the buried lagoon "probably would never happen and that it was a hypothetical scenario when I brought up the residential development of the waste lagoon." Transcript of May 20, 1992 Public Meeting at p. 40. This arbitrary assumption has biased the remedy selection process in the FS and has directly caused the flawed selection of a Contingent Remedy requiring unnecessary treatment. According to

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[9] Ohio Revised Code §3734 prohibits the excavation and construction of a hazardous waste facility without permission.